



SEQUENCE LISTING

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<120> CHEMOKINE AND RECEPTOR USES; COMPOSITIONS; METHODS

<130> DX0882XK

<140> US09/898,751

<141> 2001-07-02

<150> US09/471,549

<151> 1999-12-23

<150> US60/136,570

<151> 1999-05-27

<150> US60/113,858

<151> 1998-12-24

<160> 16

<170> PatentIn version 3.1

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<222> (1)..(1086)

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Asp Glu Glu Asp Ala Tyr Ser Ala Glu Pro Leu Pro Glu Leu Cys Tyr
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aag gcc gat gtc cag gcc ttc agc cgg gcc ttc caa ccc agt gtc tcc 144
Lys Ala Asp Val Gln Ala Phe Ser Arg Ala Phe Gln Pro Ser Val Ser
35 40 45

ctg acg ctg gct gcg ctg ggt ctg gcc ggc aat ggc ctg gtc ctg gcc 192
Leu Thr Leu Ala Ala Leu Gly Leu Ala Gly Asn Gly Leu Val Leu Ala
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acc cac ctg gca gcc cga cgc gca gcg cgc tcg ccc acc tct gcc cac	240
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ctg ctc cag ctg gcc ctg gcc gac ctc ttg ctg gcc ctg act ctg ccc	288
Leu Leu Gln Leu Ala Leu Ala Asp, Leu Leu Leu Ala Leu Thr Leu Pro	
85 90 95	
ttc gcg gca gca ggg gct ctt cag ggc tgg agt ctg gga agt gcc acc	336
Phe Ala Ala Ala Gly Ala Leu Gln Gly Trp Ser Leu Gly Ser Ala Thr	
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Cys Arg Thr Ile Ser Gly Leu Tyr Ser Ala Ser Phe His Ala Gly Phe	
115 120 125	
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Leu Phe Leu Ala Cys Ile Ser Ala Asp Arg Tyr Val Ala Ile Ala Arg	
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Ala Leu Pro Ala Gly Pro Arg Pro Ser Thr Pro Gly Arg Ala His Leu	
145 150 155 160	
gtc tcc gtc atc gtg tgg ctg ctg tca ctg ctc ctg gcg ctg cct gcg	528
Val Ser Val Ile Val Trp Leu Leu Ser Leu Leu Leu Ala Leu Pro Ala	
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Leu Ile Phe Pro Glu Gly Leu Thr Gln Thr Val Lys Gly Ala Ser Ala	
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Val Ala Gln Val Ala Leu Gly Phe Ala Leu Pro Leu Gly Val Met Val	
210 215 220	
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Ala Cys Tyr Ala Leu Leu Gly Arg Thr Leu Leu Ala Ala Arg Gly Pro	
225 230 235 240	
gag cgc cgg cgt gcg ctg cgc gtc gtg gtg gct ctg gtg gcg gcc ttc	768
Glu Arg Arg Arg Ala Leu Arg Val Val Val Ala Leu Val Ala Ala Phe	
245 250 255	
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Val Val Leu Gln Leu Pro Tyr Ser Leu Ala Leu Leu Leu Asp Thr Ala	
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Asp Leu Leu Ala Ala Arg Glu Arg Ser Cys Pro Ala Ser Lys Arg Lys	
275 280 285	
gat gtc gca ctg ctg gtg acc agc ggc ttg gcc ctc gcc cgc tgt ggc	912
Asp Val Ala Leu Leu Val Thr Ser Gly Leu Ala Leu Ala Arg Cys Gly	
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ctc aat ccc gtt ctc tac gcc ttc ctg ggc ctg cgc ttc cgc cag gac	960

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ctg	cgg	agg	ctg	cta	cgg	ggt	ggg	agc	tgc	ccc	tca	ggg	cct	caa	ccc	1008
Leu	Arg	Arg	Leu	Leu	Arg	Gly	Gly	Ser	Ser	Pro	Ser	Gly	Pro	Gln	Pro	
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cgc	cgc	ggc	tgc	ccc	cgc	cgg	ccc	cgc	ctt	tct	tcc	tgc	tca	gct	ccc	1056
Arg	Arg	Gly	Cys	Pro	Arg	Arg	Pro	Arg	Leu	Ser	Ser	Cys	Ser	Ala	Pro	
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acg	gag	acc	cac	agt	ctc	tcc	tgg	gac	aac	tag						1089
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Phe	Ala	Ala	Ala	Gly	Ala	Leu	Gln	Gly	Trp	Ser	Leu	Gly	Ser	Ala	Thr	
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Val Ser Val Ile Val Trp Leu Leu Ser Leu Leu Leu Ala Leu Pro Ala
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180 185 190

Leu Ile Phe Pro Glu Gly Leu Thr Gln Thr Val Lys Gly Ala Ser Ala
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210 215 220

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Glu Arg Arg Arg Ala Leu Arg Val Val Val Ala Leu Val Ala Ala Phe
245 250 255

Val Val Leu Gln Leu Pro Tyr Ser Leu Ala Leu Leu Leu Asp Thr Ala
260 265 270

Asp Leu Leu Ala Ala Arg Glu Arg Ser Cys Pro Ala Ser Lys Arg Lys
275 280 285

Asp Val Ala Leu Leu Val Thr Ser Gly Leu Ala Leu Ala Arg Cys Gly
290 295 300

Leu Asn Pro Val Leu Tyr Ala Phe Leu Gly Leu Arg Phe Arg Gln Asp
305 310 315 320

Leu Arg Arg Leu Leu Arg Gly Gly Ser Ser Pro Ser Gly Pro Gln Pro
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Lys Ala Asp Val Gln Ala Phe Ser Arg Ala Phe Gln Pro Ser Val Ser	
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Leu Met Val Ala Val Leu Gly Leu Ala Gly Asn Gly Leu Val Leu Ala	
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Thr His Leu Ala Ala Arg Arg Thr Thr Arg Ser Pro Thr Ser Val His	
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Leu Leu Gln Leu Ala Leu Ala Asp Leu Leu Leu Ala Leu Thr Leu Pro	
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Phe Ala Ala Ala Gly Ala Leu Gln Gly Trp Asn Leu Gly Ser Thr Thr	
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Cys Arg Ala Ile Ser Gly Leu Tyr Ser Ala Ser Phe His Ala Gly Phe	
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Leu Phe Leu Ala Cys Ile Ser Ala Asp Arg Tyr Val Ala Ile Ala Arg	
130 135 140	
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Val Ser Val Phe Val Trp Leu Leu Ala Leu Phe Leu Ala Leu Pro Ala	
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Leu Leu Phe Ser Arg Asp Gly Pro Arg Glu Gly Gln Arg Arg Cys Arg	
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ctc att ttt ccc gaa agc ctc acg cag act gtg aaa ggg gca agc gca	624
Leu Ile Phe Pro Glu Ser Leu Thr Gln Thr Val Lys Gly Ala Ser Ala	
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 Ala Cys Tyr Ala Leu Leu Gly Arg Thr Leu Leu Ala Ala Arg Gly Pro
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 Glu Arg Arg Arg Ala Leu Arg Val Val Val Ala Leu Val Val Ala Phe
 245 250 255

gtg gtg ctg cag ttg ccc tac agc ctt gcc ctg ctg ctg gat aca gcc 816
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 260 265 270

gat cta ctg gca gcc cgc gag cgg agc tgc tcc tcc agc aag cgc aag 864
 Asp Leu Leu Ala Ala Arg Glu Arg Ser Cys Ser Ser Ser Lys Arg Lys
 275 280 285

gat cta gct ttg ctg gtc acc ggc ggc ttg acc ctg gtc cgt tgc agc 912
 Asp Leu Ala Leu Leu Val Thr Gly Gly Leu Thr Leu Val Arg Cys Ser
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ctc aat ccg gtg ctt tat gcc ttt ttg ggc ctg cgt ttc cgc cgg gac 960
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ctg cgg agg ctg ctc cag ggc gga gga tgc agc ccg aag ccc aac cct 1008
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 325 330 335

cgt ggc cgc tgc ccc cgt cga ctc cgc ctt tct tcc tgc tct gct cct 1056
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Lys Ala Asp Val Gln Ala Phe Ser Arg Ala Phe Gln Pro Ser Val Ser
 35 40 45

Leu Met Val Ala Val Leu Gly Leu Ala Gly Asn Gly Leu Val Leu Ala
 50 55 60

Thr His Leu Ala Ala Arg Arg Thr Thr Arg Ser Pro Thr Ser Val His

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70

75

80

Leu Leu Gln Leu Ala Leu Ala Asp Leu Leu Leu Ala Leu Thr Leu Pro
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Phe Ala Ala Ala Gly Ala Leu Gln Gly Trp Asn Leu Gly Ser Thr Thr
100 105 110

Cys Arg Ala Ile Ser Gly Leu Tyr Ser Ala Ser Phe His Ala Gly Phe
115 120 125

Leu Phe Leu Ala Cys Ile Ser Ala Asp Arg Tyr Val Ala Ile Ala Arg
130 135 140

Ala Leu Pro Ala Gly Gln Arg Pro Ser Thr Pro Ser Arg Ala His Leu
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Val Ser Val Phe Val Trp Leu Leu Ala Leu Phe Leu Ala Leu Pro Ala
165 170 175

Leu Leu Phe Ser Arg Asp Gly Pro Arg Glu Gly Gln Arg Arg Cys Arg
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Leu Ile Phe Pro Glu Ser Leu Thr Gln Thr Val Lys Gly Ala Ser Ala
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Val Ala Gln Val Val Leu Gly Phe Ala Leu Pro Leu Gly Val Met Ala
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Ala Cys Tyr Ala Leu Leu Gly Arg Thr Leu Leu Ala Ala Arg Gly Pro
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Glu Arg Arg Arg Ala Leu Arg Val Val Val Ala Leu Val Val Ala Phe
245 250 255

Val Val Leu Gln Leu Pro Tyr Ser Leu Ala Leu Leu Leu Asp Thr Ala
260 265 270

Asp Leu Leu Ala Ala Arg Glu Arg Ser Cys Ser Ser Ser Lys Arg Lys
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Asp Leu Ala Leu Leu Val Thr Gly Gly Leu Thr Leu Val Arg Cys Ser
290 295 300

Leu Asn Pro Val Leu Tyr Ala Phe Leu Gly Leu Arg Phe Arg Arg Asp
305 310 315 320

Leu Arg Arg Leu Leu Gln Gly Gly Gly Cys Ser Pro Lys Pro Asn Pro
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 His Ala Ser Glu Ala Ile Leu Pro Ile Ala Ser Ser Cys Cys Thr Glu
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gtt tca cat cat att tcc aga agg ctc ctg gaa aga gtg aat atg tgt 202
 Val Ser His His Ile Ser Arg Arg Leu Leu Glu Arg Val Asn Met Cys
 15 20 25

cgc atc cag aga gct gat ggg gat tgt gac ttg gct gct gtc atc ctt 250
 Arg Ile Gln Arg Ala Asp Gly Asp Cys Asp Leu Ala Ala Val Ile Leu
 30 35 40

cat gtc aag cgc aga aga atc tgt gtc agc ccg cac aac cat act gtt 298
 His Val Lys Arg Arg Arg Ile Cys Val Ser Pro His Asn His Thr Val
 45 50 55

aag cag tgg atg aaa gtg caa gct gcc aag aaa aat ggt aaa gga aat 346
 Lys Gln Trp Met Lys Val Gln Ala Ala Lys Lys Asn Gly Lys Gly Asn
 60 65 70 75

gtt tgc cac agg aag aaa cac cat ggc aag agg aac agt aac agg gca 394
 Val Cys His Arg Lys Lys His His Gly Lys Arg Asn Ser Asn Arg Ala
 80 85 90

cat cag ggg aaa cac gaa aca tac ggc cat aaa act cct tat 436
 His Gln Gly Lys His Glu Thr Tyr Gly His Lys Thr Pro Tyr
 95 100 105

tagagagtct acagataaat ctacagagac aattcctcaa gtggacttgg ccatgattgg 496

ttgtcctgca tactgatgaa actactgatg tcvgctggtc tgaaaggacc taccagaagc 556

taaatctcca agaatgccat ttccctatcc ctaatgattc aatctccctt accctgacca 616

atcagtggcc caaattttcc agccccctgc ctcccagaac cccagcccag aactcttcag 676

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 15 20 25

Cys Arg Ile Gln Arg Ala Asp Gly Asp Cys Asp Leu Ala Ala Val Ile
 30 35 40

Leu His Val Lys Arg Arg Arg Ile Cys Val Ser Pro His Asn His Thr
 45 50 55

Val Lys Gln Trp Met Lys Val Gln Ala Ala Lys Lys Asn Gly Lys Gly
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Asn Val Cys His Arg Lys Lys His His Gly Lys Arg Asn Ser Asn Arg

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Ala His Gln Gly Lys His Glu Thr Tyr Gly His Lys Thr Pro Tyr
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 Ile Tyr Trp Gly Cys Phe Tyr Phe Phe Pro Trp Leu Arg Met Trp Arg
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 agg gag cgg agt ccg atg tct cca aca agc cag aga cta agt ctg gaa 144
 Arg Glu Arg Ser Pro Met Ser Pro Thr Ser Gln Arg Leu Ser Leu Glu
 35 40 45

 gcc ccc agc ctc cca ctg aga agc tgg cat ccg tgg aac aag act aag 192
 Ala Pro Ser Leu Pro Leu Arg Ser Trp His Pro Trp Asn Lys Thr Lys
 50 55 60

 cag aag caa gaa gcc ttg cct ctg ccc tcc agc act agc tgc tgt act 240
 Gln Lys Gln Glu Ala Leu Pro Leu Pro Ser Ser Thr Ser Cys Cys Thr
 65 70 75 80

 cag ctc tat aga cag cca ctc cca agc agg ctg ctg agg agg att gtc 288
 Gln Leu Tyr Arg Gln Pro Leu Pro Ser Arg Leu Leu Arg Arg Ile Val
 85 90 95

 cac atg gaa ctg cag gag gcc gat ggg gac tgt cac ctc cag gct gtc 336
 His Met Glu Leu Gln Glu Ala Asp Gly Asp Cys His Leu Gln Ala Val
 100 105 110

 gtg ctt cac ctg gct cgg cgc agt gtc tgt gtt cat ccc cag aac cgc 384
 Val Leu His Leu Ala Arg Arg Ser Val Cys Val His Pro Gln Asn Arg
 115 120 125

 agc ctg gct cgg tgg tta gaa cgc caa ggg aaa agg ctc caa ggg act 432
 Ser Leu Ala Arg Trp Leu Glu Arg Gln Gly Lys Arg Leu Gln Gly Thr
 130 135 140

 gta ccc agt tta aat ctg gta cta caa aag aaa atg tac tca aac ccc 480
 Val Pro Ser Leu Asn Leu Val Leu Gln Lys Lys Met Tyr Ser Asn Pro
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<213> Homo sapiens

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35 40 45

Ala Pro Ser Leu Pro Leu Arg Ser Trp His Pro Trp Asn Lys Thr Lys
50 55 60

Gln Lys Gln Glu Ala Leu Pro Leu Pro Ser Ser Thr Ser Cys Cys Thr
65 70 75 80

Gln Leu Tyr Arg Gln Pro Leu Pro Ser Arg Leu Leu Arg Arg Ile Val
85 90 95

His Met Glu Leu Gln Glu Ala Asp Gly Asp Cys His Leu Gln Ala Val
100 105 110

Val Leu His Leu Ala Arg Arg Ser Val Cys Val His Pro Gln Asn Arg
115 120 125

Ser Leu Ala Arg Trp Leu Glu Arg Gln Gly Lys Arg Leu Gln Gly Thr
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 Cys Ser Ile Gln Arg Ala Asp Gly Asp Cys Asp Leu Ala Ala Val Ile
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 Leu Lys Gln Trp Met Arg Ala Ser Glu Val Lys Lys Asn Gly Arg Glu
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aac gtc tgt tct ggg aaa aaa caa ccc agc agg aag gac aga aaa ggg 336
 Asn Val Cys Ser Gly Lys Lys Gln Pro Ser Arg Lys Asp Arg Lys Gly
 75 80 85 90

cac act acg aga aag cac aga aca cgt gga aca cac agg cac gaa gcc 384
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tct cgt tag 393
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 15 20 25

Cys Ser Ile Gln Arg Ala Asp Gly Asp Cys Asp Leu Ala Ala Val Ile
 30 35 40

Leu His Val Lys Arg Arg Arg Ile Cys Ile Ser Pro His Asn Arg Thr
 45 50 55

Leu Lys Gln Trp Met Arg Ala Ser Glu Val Lys Lys Asn Gly Arg Glu
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Asn Val Cys Ser Gly Lys Lys Gln Pro Ser Arg Lys Asp Arg Lys Gly
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His Thr Thr Arg Lys His Arg Thr Arg Gly Thr His Arg His Glu Ala
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Ser Arg

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 Lys Val Ile Gln Val Glu Leu Gln Glu Ala Asp Gly Asp Cys His Leu
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 Gln Ala Phe Val Leu His Leu Ala Gln Arg Ser Ile Cys Ile His Pro
 45 50 55

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 Gln Asn Pro Ser Leu Ser Gln Trp Phe Glu His Gln Glu Arg Lys Leu
 60 65 70

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Gln Ala Phe Val Leu His Leu Ala Gln Arg Ser Ile Cys Ile His Pro
 45 50 55

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Pro Gln Asn Arg Ser Leu Ala Arg Trp Leu Glu Arg Gln Gly Lys Arg
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